GRUMMAN CORPORATION

1973
Forty-Fourth Annual Report

GRUMMAN CORPORATION
BETHPAGE, NEW YORK 11714

CONTENTS

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E. Clinton Towl,
Chairman of the Board

To the Shareholders of Grumman Corporation:

The twelve months of 1973 were the most critical in Grumman's history. They included the financial crisis caused by the F-14 contract, the culmination of which ended in a negotiated settlement with the U.S. Navy. Following the settlement there began an extraordinary effort in every area of the corporation which provided a strong start toward a new, healthier, and more promising business future.

Consolidated sales and other income in 1973 reached \$1,087,948,463 as compared to \$686,279,401 in 1972. Consolidated 1973 profits were \$28,243,317 (including an extraordinary item of \$11,300,000 or \$1.66 per share) which amounted to \$4.15 per share. This compares with a loss in 1972 of \$70,026,223 or \$10.26 per share.

The most significant event was the settlement, in March 1973, of the long-standing F-14 contract problems with the Navy which led to an order of 50 additional aircraft to be delivered in 1975 under a new contract, and the limiting of the original contract that had brought about most of the financial problems associated with the program. Throughout the year, the F-14 continued to perform up to expectations and, following the Navy's most recent order, it was announced that an agreement had been signed between the United States and the Government of Iran to provide 30 Tomcat fighters for use by the Imperial Iranian Air Force. The contract settlement, the Navy's follow-on procurement, and the first foreign request for the F-14 represented a vote of confidence in the fighter's capabilities, further insured its future production life, and imparted

John C. Bierwirth,
President

a stabilizing effect to the program. In essence, the F-14 program evolved throughout the year from a serious threat to the company's financial survival into a major solid portion of the business base for future growth.

By eliminating the threat of continued financial drain previously caused by the unsettled F-14 program and as a result of higher sales and earnings, the corporation was able to pay a dividend of $.15 per share in the fourth quarter of 1973 (the first since February 1972). That dividend extended Grumman's record of annual dividend payments to forty-four consecutive years. (At its February 1974 meeting, the Board of Directors declared a subsequent dividend of $.15 per share payable March 20, 1974 to shareholders of record as of March 8, 1974, and also announced that future dividend payments would be considered on a regular quarterly basis.)

The year 1973 was also highlighted by the solid performance on government contracts other than the F-14, and the corporation's commercial business. Commercial activities accounted for 30% of the corporations's consolidated earnings before extraordinary item. The outstanding effort put forth by the F-14 personnel accomplished Grumman Aerospace Corporation's important task of bringing the program back on schedule by year-end. These efforts laid the groundwork for future growth at Grumman, and constituted a major step in the rebuilding of Grumman's financial strength.

Some of our planned undertakings for 1974 are ambitious, but the kind of effort being contributed by the men and women involved is, in itself, a promise of success. Our past problems have been contractual, rather than performance-related, and with those problems now resolved, the outlook is far more promising than it was at this time last year.

Our major military aircraft programs are firm and continuing into the future, and—with the exception of the F-14—are profitable. The F-14 program is expected to begin returning a profit in 1975.

The current year will hold many challenges, not the least of which may be an impact stemming from the nation's energy crisis. It is difficult to assess the possibilities since neither the extent of the crisis nor the solution have been clearly defined. There is little doubt, however, that fuel and raw material shortages—if severe enough—will have an effect on some Grumman product lines and operating areas. The early impact has already slowed sales of such products as commercial aircraft produced by Grumman American Aviation Corporation and Grumman Allied Industries' recreational Motorhomes. It is expected, however, that both American and Allied will achieve substantial sales levels in 1974.

It should also be noted that the energy crisis could present new business opportunities by placing a premium on Grumman's diverse technical capabilities. The corporation is already actively involved in the fields of energy and pollution control, special-use vehicles, and contracted studies in energy conservation. These varied activities will warrant priority during the crisis and aid in seeking solutions to the nation's energy problems.

You will find more detail concerning our subsidiaries' activities on the following pages of this report, and we hope that you will read it carefully. We hope, also, that our account of those activities projects the fact that the new era at Grumman, predicted in our 1972 annual report, has begun.

This report for 1973 would be incomplete if mention were not made of the retirement at year-end of William T. Schwendler, Chairman of our Executive Committee, and one of the founders of Grumman Corporation. His career was one of the most contributive and successful ever associated with the company.

Corporate Secretary, Lawrence D. Rockwell also retired at the end of December after 32 years of dedicated service. He is replaced as Secretary of the Corporation by Robert W. Bradshaw.

During 1973, Edward Balinsky was elected Vice President-Investment Management; Corporate Treasurer Robert G. Freese was elected a Vice President; and Peter E. Viemeister was elected Vice President-Development.

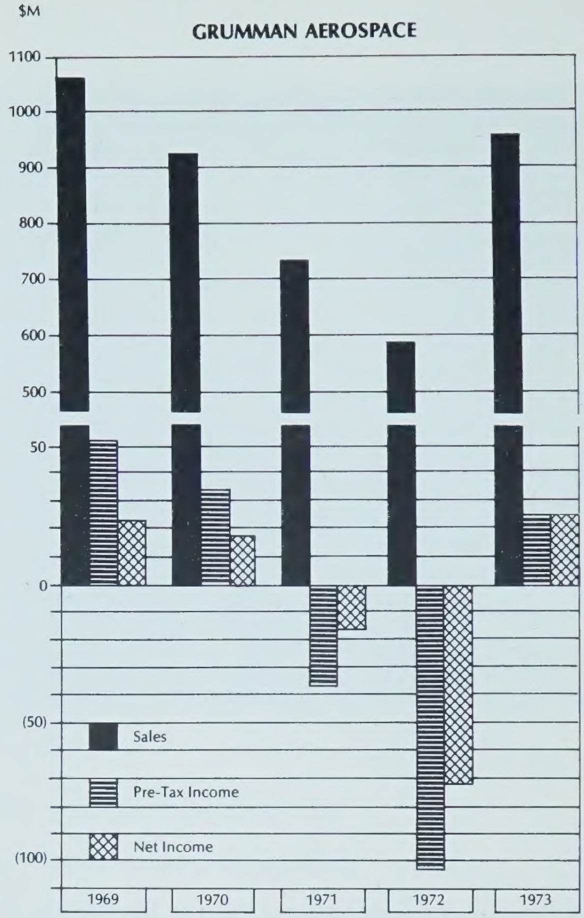
In closing, we wish to give special recognition and thanks to our entire working team of talented people whose collective efforts have sustained the corporation through 1973—as they always have in the past—and with whom we are proud to share the future.

E. Clinton Towl
Chairman of the Board and
Chief Executive Officer

John C. Bierwirth
President

GRUMMAN AEROSPACE

Joseph G. Gavin, Jr.,
Chairman of the Board



Grumman Aerospace sales and other income for 1973 totaled \$947,110,000, producing a net income of \$24,520,000, including an extraordinary item of \$11,500,000. Comparable figures for the year 1972 were sales and other income of \$647,920,000 and a net loss of \$68,684,000. The company's backlog at December 31, 1973 was \$1,389,000,000 of which \$642,000,000 was for work authorized for the F-14 program. Orders under negotiation are included in the backlog figure only to the extent funded.

Military Aircraft

An intense and well-coordinated effort among all military aircraft program personnel—especially by those involved in the F-14A Tomcat project—enabled the company to fulfill its year-end schedules and enter into 1974 with an "on-target" record.

The March 1973 settlement of the F-14 program's contractual problems was based on the company's agreement to accept the previously rejected Lot V order for 48 additional aircraft under the original terms of the contract, and the government's agreement to cancel remaining procurement options for the aircraft under that contract beyond Lot V. New orders for the F-14 are negotiated on a yearly basis, which permits pricing to take into account the impact of inflation at current rates, and make normal profit goals attainable.

The effects of the settlement and subsequent negotiations of some remaining contractual matters concluded later in 1973, were to increase the estimated loss at completion of Lots I-V to \$220,000,000 before tax credits. This loss was reflected through a write-down of F-14 inventories to realizable values in the following years: 1973—\$15,000,000; 1972—\$140,000,000; and 1971—\$65,000,000.

The resolution, and the ensuing stability which that settlement imparted to the program, placed an increased emphasis on both the company's production achievements in 1973 and the Tomcat's outstanding performance throughout the year.

A total of 54 F-14 aircraft were delivered to the Navy by year-end, and the milestone Board of Inspection and Survey Trials were successfully completed.

F-14 Tomcat fighter on simulated "enemy" tail chase.

The F-14's progress continued to bolster its widespread reputation as the free world's most capable air superiority fighter, and the program moved forward on schedule toward the Navy's planned operational fleet deployment date. One training squadron and two operating squadrons have been formed and are currently flying the Tomcat in preparation for that deployment. Reports of successful tests results from those activities—especially those concerning the fighter's primary Phoenix missile weapon system—confirmed the F-14's ability. Perhaps the most encouraging endorsement, however, was the 30-plane order from the Government of Iran previously announced by the Department of Defense. When finally negotiated with the Department of Defense, it will be the largest single foreign program ever undertaken by Grumman.

The E-2C Hawkeye represents the culmination of Grumman's thirty years of experience in airborne early warning and control systems. This newest and most versatile member of the Hawkeye family entered Naval service a full month ahead of schedule in 1973. As the only operational U.S. aircraft designed expressly as an all-weather, carrier-, or land-based combat intelligence center, the E-2C's system capabilities have also attracted a great deal of interest abroad. The company was awarded a study contract, funded by the United Kingdom to determine the feasibility of utilizing the Hawkeye's system in British aircraft.

The EA-6B Prowler is the Fleet's most advanced electronic countermeasures aircraft performing the front-line function of identifying, recording, and jamming enemy electronic activity while leading strike missions. Twelve Prowlers were produced during 1973, and three squadrons of the aircraft have been on operational duty in the Pacific.

During the decade 1960-1970, nearly 500 basic A-6A Intruders were delivered to the U.S. Navy. Today's version of this all-weather attack airplane is the A-6E, which has been fully updated with new radar, computer and weapons systems, and other state-of-the-art refinements. In keeping with the company's policy of economical modification of basic airframes, three other members of the A-6 family are also being produced; the A-6B, which uses anti-radiation missiles for suppressing surface-to-air missiles; the A-6C, which is used against enemy ground vehicles in darkness; and the KA-6D tanker, employed for in-flight refueling of various attack and fighter aircraft on extended missions.

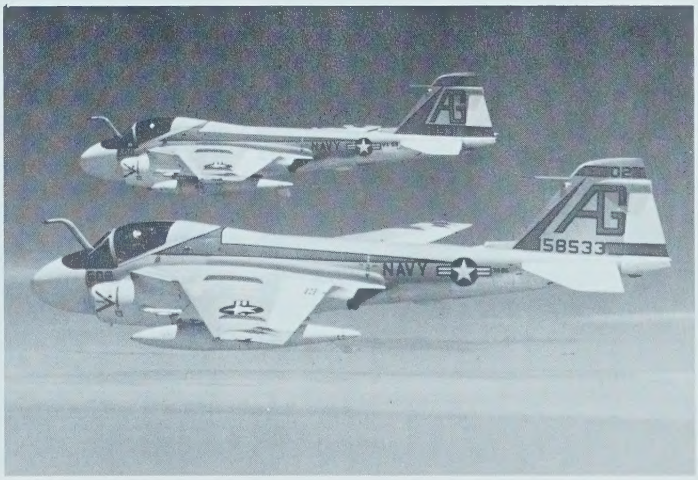
Space

In 1973 the company won three highly competitive space awards. One award, from Rockwell International, covers the design, production and testing of five sets of wings and various test articles for the Space Shuttle Orbiter. A second contract was received for the design and construction of two Earth Limb Measurement Satellite (ELMS) systems for the U.S. Air Force Space and Missile Systems Organization. These vehicles, the first of which is scheduled for launch in 1975, will observe and measure aspects of various scientific theories. Aerospace was also awarded a contract from the National Aeronautics and Space Administration's Johnson Space Center to develop two aircraft for use in training flight crews for Space Shuttle operations. This contract covers the modification of two Grumman American Gulfstream II aircraft into Shuttle Training Aircraft capable of simulating the flying characteristics of the Space Shuttle Orbiter during its atmospheric flights. The Gulfstream trainers will also be used to simulate approach and landing techniques in Space Shuttle operations. Design and fabrication of the two aircraft are being performed at Bethpage and Grumman American Aviation's Savannah, Georgia, facilities.

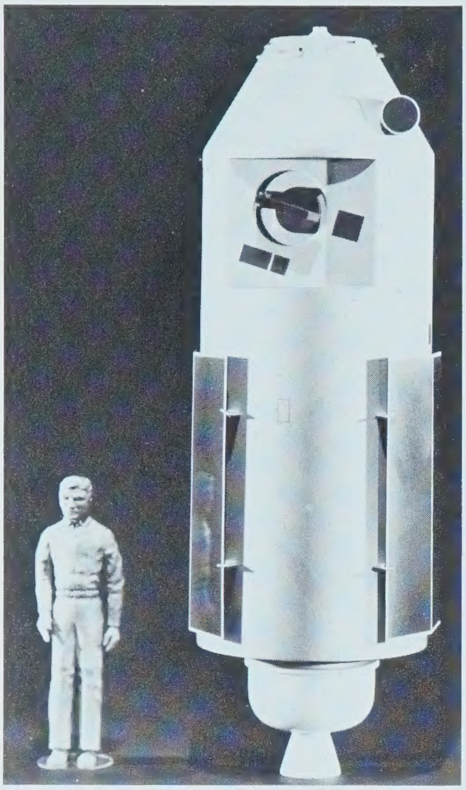
Copernicus, the NASA/Grumman Orbiting Astronomical Observatory

EA-6B Prowler

E-2C Hawkeye



A-6E Intruder



Model of Earth Limb Measurement Satellite

launched in 1972, continues to provide new and useful data. In 1973, via X-ray measurements, it provided unique information on the so-called "black hole," and also studied the comet Kohoutek. The OAO will continue its scientific observations into 1974.

Product Support

Some 34% of Grumman Aerospace's business in 1973 resulted from the sale of test and maintenance equipment, training devices, spare parts, modification kits, technical publications, customer training and field service. Our support programs included the delivery of some 400,000 spare parts, the publication of more than 1100 technical manuals and the training of 350 customer technicians, flight officers and pilots.

Product and Technology Development

This department is concerned with the development of marketable new products and services, and the expansion of existing product lines. For instance, exhaustive studies were made of F-14 variations aimed at reducing the overall cost of the aircraft. These investigations led to a Navy contract to define the most promising variations for future procurement considerations.

A brief selection of other product and technology developments includes:

- a $2.5 million contract, along with General Dynamics Corporation, for a design study on the EF-111A electronic countermeasures aircraft. This contract involves the installation of the EA-6B Prowler tactical jamming system in the Air Force F-111A aircraft. A possible future phase of this contract would involve the conversion of current F-111's to EF-111's.
- an Aerospace-developed, self-contained pod for anti-submarine warfare surveillance which would enable a variety of aircraft to perform the ASW mission with the simple attachment of an externally mounted unit. A comparable development is a prototype reconnaissance pod for use on current Navy tactical aircraft which enables them to convert to reconnaissance and surveillance missions.
- the commercially-oriented development of an automatic fire hose control nozzle currently being demonstrated to, and evaluated by, fire companies and other major users.
- the development of heat pipes for temperature control. In 1973 the company won eight separate contracts for heat pipe development and use, and is investigating their potential application to preserve the permafrost bed into which the supports for the Alaskan pipeline will be sunk.
- the Ozotherm shipboard sewage and waste treatment system, developed for the U.S. Coast Guard, which has attracted attention from NASA and from several shipping companies who are seeking to comply with new environmental regulations.
- the design of a complete information center by which Navy task force commanders can exercise command and control of all fleet elements under simulated conditions. The development of management systems such as this one presents a new business area of high potential for Grumman.

Complete information center for performance of fleet command and control.

Model of F-111 USAF swing-wing fighter for conversion to electronic countermeasures role.

Research

Significant advances in several major areas of investigation highlighted Aerospace Corporation's research endeavors in 1973. Achievements were realized in corporation-supported research and in several programs funded by independent agencies.

Some of the most meaningful areas in which Research is currently involved are:

Materials science in space investigations. Skylab experiments have shown that materials processed in the zero-gravity environment of space yield structural growth patterns never before seen. Grumman scientists are carrying out detailed examinations of a number of such specimens, and will further extend this work through participation in the American/Russian Apollo-Soyuz mission. These experiments will also lay the foundation for space processing missions with the Shuttle Sortie Lab.

Sensor technology. A number of sensor technology programs are providing vital technical capability in developing Air Force military space business. Grumman's radiation environment simulation capability and extensive background in the analysis of radiation effects were instrumental in the company's winning of the Spacetrack Experiment Evaluation and Design Study. The company has also been working closely with the Advanced Research Projects Agency on the early detection and tracking of missile launches.

Computer linked system for studying heart condition. Working with the Arizona Heart Institute, Grumman Research has developed a system to analyze the human heart's ability to accommodate physical stress and strain. Linked to a computer, the system analyzes large quantities of information to determine overall heart condition.

Subcontracting

In airframe subcontracting the company continued to deliver machined forgings to Alcoa for the Douglas DC-10 aircraft. Purchase orders were also received from Dassault for prototype quantities of welded wing panels for a new French fighter aircraft, and from Boeing-Vertol for preproduction quantities of welded rotor blade hub components for the Army's UTTAS helicopter.

Falcon-10 engine nacelle pods continued in production for Dassault. Design and prototype work was performed on a thrust reverser for the Garrett TFE-731 engine, for which sales appear imminent in 1974.

Grumman Houston

In October 1973, Grumman Aerospace announced the formation of a wholly owned subsidiary, Grumman Houston Corporation. The company was formed to operate, primarily, as a NASA contractor for specialized hardware and services; a support equipment supplier to Grumman Aerospace and others; and as a contractor for the commercial field in electromechanical hardware. Grumman Houston Corporation provides a high potential for expanding Grumman activity in a new geographic area of strong economic growth.

Grumman Energy Systems Group

Two years ago, Grumman initiated a stringent energy-saving program within its own facilities utilizing high-technology, aerospace-developed systems engineering and analysis techniques. That program has been preeminently successful to date saving an estimated 70% of the fuel oil and 50% of the electricity normally consumed in previous years within three separate buildings to which the program was applied.

The Grumman Energy Systems Group was formed to market energy conservation expertise in areas outside the company and, at present, they are providing their services—under contracts—to clients ranging from state governments to private business firms and public school districts.

This new area of business, presented to the company as a result of the energy crisis, has a firm growth potential.

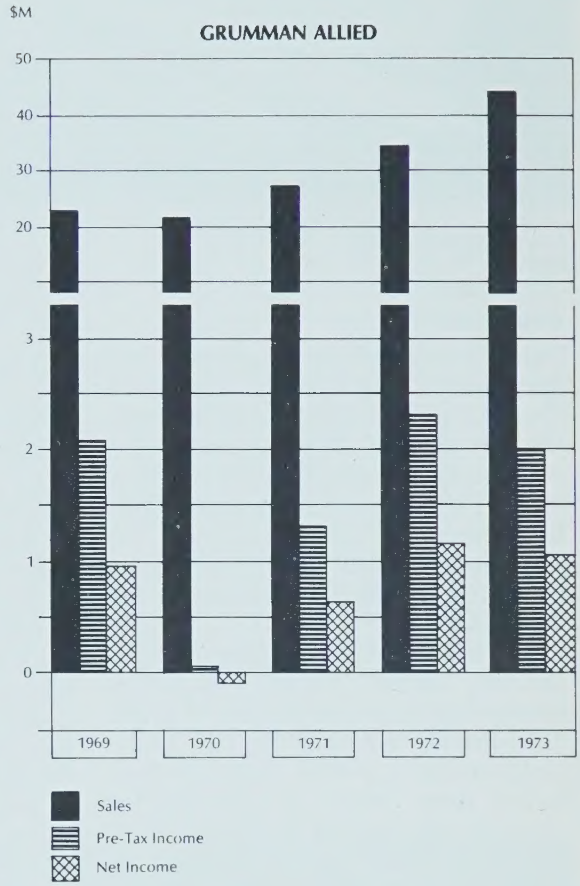
Equal Opportunity/Affirmative Action Policy

Grumman Corporation and its subsidiaries adhere to a policy which demands that all of its employees are to be treated with fair and equal consideration in a manner free of any bias or prejudice. No decision or evaluation regarding hiring, raises, promotions, transfers, training, termination, social and recreation programs, etc., will be based on, or influenced by, an individual's race, color, creed, sex, age or national origin.

Subsidiaries falling within the provisions of Revised Order No. 4 issued by the Secretary of Labor pursuant to Executive Order 11246, have established Affirmative Action Programs, and progressive plans which have created a better working environment for all employees. By placing emphasis on employment opportunities and development for Women, Blacks, Spanish-surnamed Americans, Orientals, and American Indians, Grumman has become a stronger company in its use of human resources. Employees have been made aware of company commitments and their responsibilities with regard to this program.

GRUMMAN ALLIED INDUSTRIES.

Robert F. Loar, President and Wallace B. Spielman,
Chairman of the Board



Grumman Allied completed the most successful sales year in its ten-year history with Olson Truck Bodies, Grumman Boats, Pearson Yachts, and the Wormuth Bros. Foundry divisions contributing most substantially to the company's overall performance.

Sales and other income for the year amounted to $44,289,000 with a net income of $1,060,000 compared to sales of $34,284,000 and net income of $1,125,000 reported for 1972. Profitability was adversely affected during the year by the start-up of motor home production in the Montgomery, Pa. plant and, toward the end of the year, by the cut-back in motor home production due to the fuel shortage. Currently motor homes are being produced only for firm orders. The Modular Building Division, also located in Montgomery, Pa., suspended production in 1973 and suffered a loss for the year.

Aluminum's lightweight, durable construction qualities provide Olson truck bodies with better operating mileage-per-gallon and has created a strong demand for these vehicles, particularly during the current energy crisis. The Kurbmaster delivery van has proved itself to be one of the finest truck bodies of its kind, and is used by most of the major fleets in the nation, including the laundry, bakery, linen-supply, parcel delivery, and other industries. Vehicles such as specialized buses, ambulances, and health care units are currently in development or in production. In addition to the company's production facilities at Athens, N.Y., Sherman, Texas, Sturgis, Michigan, and Tulare, California, a new production facility has been established in Mayfield, Pa., and the Montgomery, Pa. plant has been partially converted to the manufacture of truck bodies.

Grumman Boats once again set records for sales, production and earnings. Sales of the ever-popular Grumman aluminum canoe increased by 40% over the previous year, and the backlog was 150% higher. Facilities expansion at the Grumman Boats plant in Marathon, N.Y. is planned to meet increased sales demand.

Pearson Yachts sales rose 32% during the year. Sales activity at the start of 1974 indicates that many potential power boat purchasers are now selecting sailing auxiliaries with their lower fuel consumption. The 10 Metre (33 ft.) Pearson auxiliary was added to the 1973 line which now offers an attractive variety of models ranging from 22 to 41 feet in length.

1973 was the first full year that the Wormuth Bros. Foundry had complete use of its recent plant expansion and installation of automated equipment. The result was new records for sales and earnings. Further automated equipment expansion is being studied to increase future sales capability and to diversify the product line.

Grumman 19-foot aluminum canoe

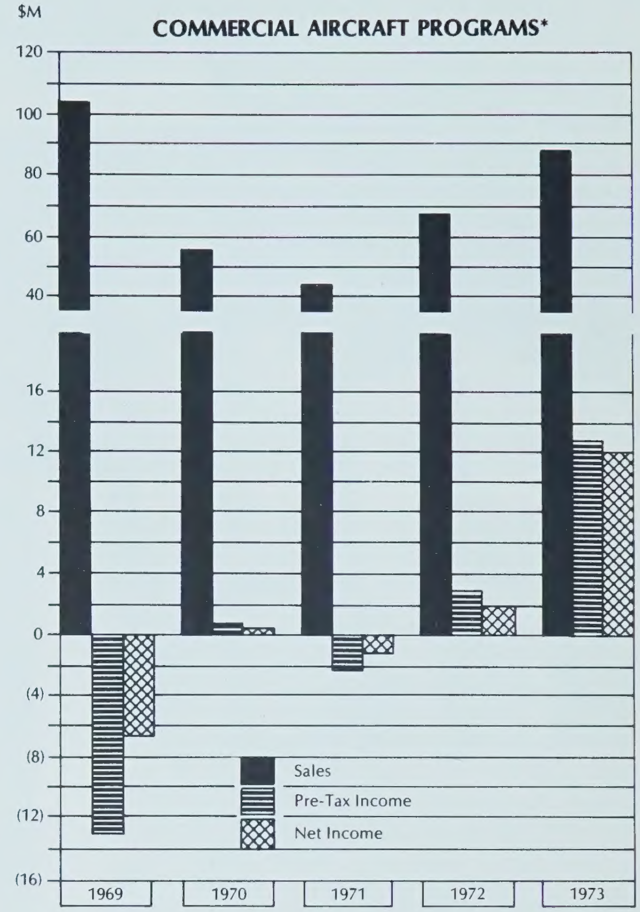
Popular Pearson P-36

New Pearson 10 Metre sailing auxiliary

1973 Olson Kurbmaster model foreground;
1960 model still in customer operation.

GRUMMAN AMERICAN AVIATION

Russell W. Meyer, Jr.,
President



*The consolidation in Grumman American Aviation Corporation of Grumman's commercial aircraft programs with American Aviation's light aircraft programs occured as of January 2, 1973. For the years 1969 thru 1972 sales and income (losses) of these programs have been combined in the above chart.

Grumman American Aviation Corporation, which began operations as a subsidiary in January 1973, reported total revenues of $86,816,000, and net income (including an extraordinary item of $5,364,000) of $11,763,000 for the year.

Grumman American entered 1974 with five firm Gulfstream II orders in hand, and a schedule which calls for the production of fifteen aircraft in 1974. Nineteen were produced in 1973.

Complete Gulfstream manufacturing, engineering, marketing and service operations are now consolidated in the company's Savannah, Georgia facility. During the year, a joint venture was undertaken with Flight Safety International, Inc., to establish the Gulfstream Learning Center at Savannah. The Center, located in the Grumman American facility, provides Gulfstream operators the opportunity of scheduling crew training to coincide with aircraft service or delivery. More than 450 aircraft were serviced at Savannah in 1973, providing an important source of revenue for the company. Construction now underway will double the size of the Service Center in 1974.

Grumman Ag-Cat deliveries in 1973 totaled 175 compared to 145 in 1972. We expect the growth in Ag-Cat sales to continue in 1974. Almost 1200 Ag-Cats have been delivered since the inception of the program, and its fine, durable quality and extraordinary safety record continue to earn this aircraft world-wide acceptance as the standard of the agricultural aviation industry.

The introductions of American's new 1974 models of its single-engine aircraft—the American Trainer, TR-2, and Traveler—were enthusiastically received by dealers and the public. World-wide dealerships for these aircraft now number 178. A total of 469 single-engine aircraft were delivered in 1973 including 234 Travelers, and 235 Trainers.

The Grumman American Flying Centers Program, which offers a coordinated ground and flight training program to student pilots, was introduced during the year, and is now available at 62 locations throughout the U.S. and Canada.

Looking ahead into 1974, Grumman American has attempted to assess the impact of the energy crisis on aircraft orders. With little definite information upon which to conduct a thorough analysis, the company has estimated that the fuel shortage will result in a reduction in the rate of incoming orders. The company has planned its operations accordingly, but has retained the flexibility to adjust promptly to any further changes in the situation.

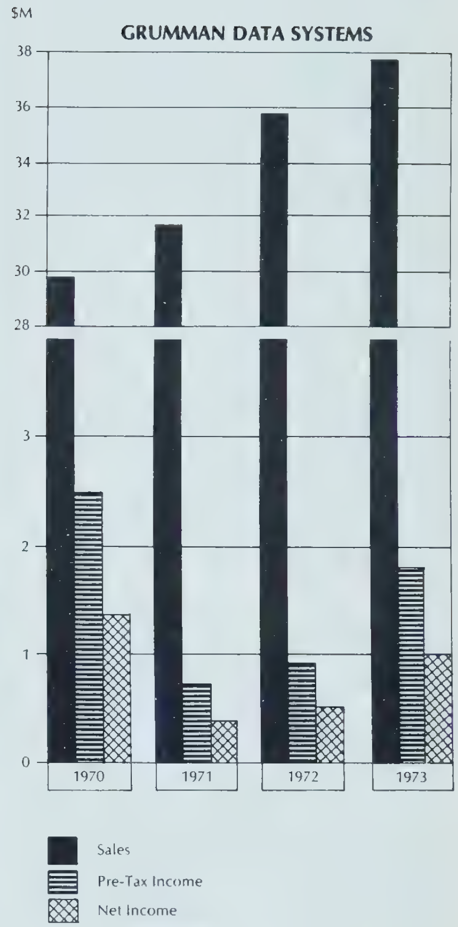
Grumman Gulfstream II

Super Ag-Cat

Grumman American Traveler

GRUMMAN DATA SYSTEMS

Robert A. Nafis,
President



Grumman Data Systems Corporation continued expanding its business base in 1973 and, for the third straight year, doubled its non-Grumman business over the previous year.

This subsidiary recorded sales and other income of $37,755,000 and net income of $993,000, compared to a sales total of $35,942,000 and net income of $498,000 in 1972.

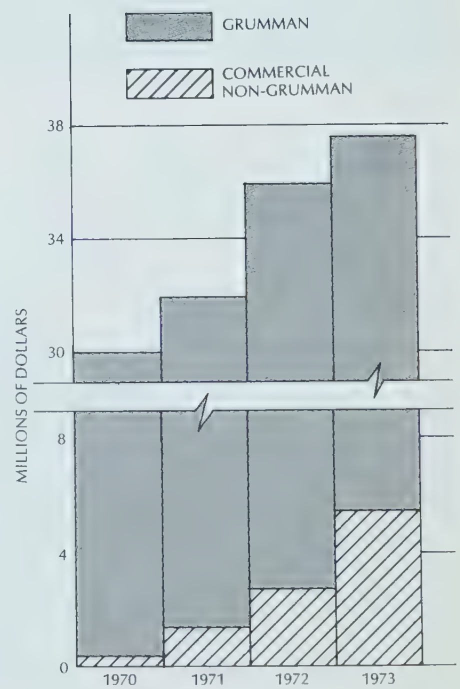
Data Systems won a U.S. Air Force contract for $4.4 million to build a real-time flight test data processing system at Edwards Air Force Base in California. Patterned after the Automated Telemetry System operated by Data for Grumman Aerospace, the system will be operational in 1974. Flight test of the Air Force's B-1 supersonic bomber is expected to be the first application.

Work also continued on a contract for the development of real-time analytical software to support the Boeing Vertol/Army Utility Tactical Transport Aircraft System (UTTAS) flight test program at Calverton, Long Island. Additional UTTAS contracts are expected during 1974.

During 1973, the company entered the growing European market for automated telemetry and related software products and services with a contract negotiated with Messerschmitt-Bolkow-Blohm in support of NATO's Multi-Role Combat Aircraft (MRCA) flight test program.

Non-Aerospace customers have nearly doubled in number in commercial computer network services. Airlines, recording companies, telephone companies and rental car agencies were among the major business areas served.

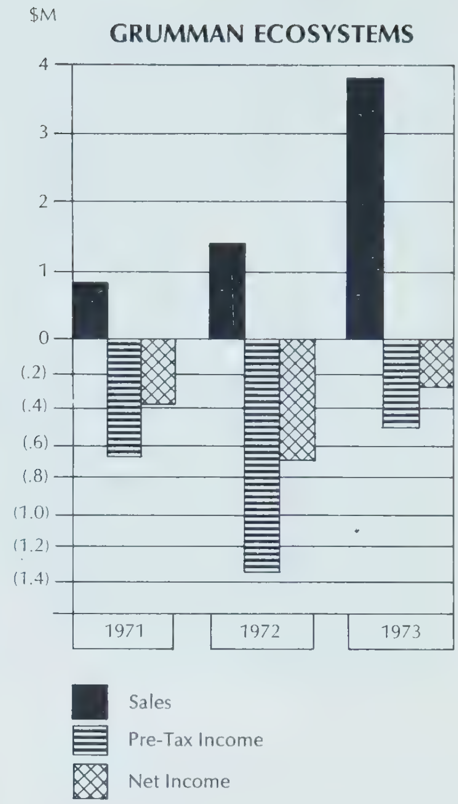
To consolidate its expanding activities, the company leased a new 35,000 sq. ft. facility in Woodbury, L. I. in November 1973. Scheduled for occupancy in early March 1974, the facility will house product development activities and financial services systems. Computility, Inc., the Boston subsidiary, was merged into Data Systems and, effective December 31, 1973, became a division of the expanding corporation. Data also acquired both DASH, a data base management system for small business users, and a license for Dartmouth Time Sharing Systems which gains the company entry into software educational systems.



Data Systems' commercial growth

GRUMMAN ECOSYSTEMS

Wm. T. Schwendler, Jr.,
President



Grumman Ecosystems Corporation's sales and other income for 1973 amounted to $3,705,000 resulting in a net loss of $265,000. In 1972, the company reported a net loss of $698,000 on sales of $1,494,000. At December 31, 1973, the company's backlog was $4,600,000.

During 1973, Ecosystems' major activities were concentrated in environmental services and pollution control construction, systems, and products.

In the construction area, Ecosystems signed its largest contract to date ($1.95 million) and work was begun on the upgrading of an existing municipal sewage treatment plant at Shelton, Connecticut. Another contract amounting to over $1 million was also awarded to the company by the Town of Huntington, N.Y., for upgrading its existing incinerator.

Of seven major sewage and incineration projects completed during the year, two were turnkey plants where Ecosystems was responsible for complete design and construction. At year-end, there were eight other major projects underway.

Ecosystems' pollution control systems activities included obtaining a license for sales in the United States of the Selectomatic Commest solid waste recycling system as well as an exclusive license to sell Incinermatic municipal incinerators. The existence of four Selectomatic Commest systems in Italy and five Incinermatic incinerators in the United States has established the workability of both systems.

Under a recent agreement between Grumman Ecosystems and Grumman Aerospace, Ecosystems is the worldwide marketing organization for Ozotherm shipboard sewage and galley waste systems, and two units are currently scheduled for installation.

Ecosystems' expanding line of pollution control products includes stacks, chutes, and packaged incinerators. Marketed under the Power-Pac trade name, refractory-lined steel stacks are used as incinerator and boiler stacks for both interior and free-standing use. Square, refractory-lined rubbish chutes are used in mid and high-rise buildings in conjunction with compactors or incinerators. Packaged incinerators for apartment houses, hospitals, restaurants, supermarkets and schools will be introduced in 1974.

Environmental and Mapping efforts increased sharply in 1973 due to a concentration on services to public utilities. A year-long study is underway to determine possible nuclear power plant sites for the Long Island Lighting Company. Other mapping projects for this utility include isothermal contour maps, and routes for overhead and underground transmission lines.

Another major Ecosystems study is being conducted for the New York State Atomic and Space Development Authority relating to the offshore siting of nuclear power facilities within an 800-mile area in the New York Bight.

Work is also being done for the United States Corps of Engineers that will determine the navigability of the waterways in Georgia's river basins. Over 13,000 miles of rivers and tributaries are being investigated by means of ground reconnaissance, aerial surveillance, and hydrological data acquisition.

In addition, the increased concern on the parts of both state and federal governmental agencies, as well as the efforts of civic organizations, for improved pollution and environmental control and maximum utilization of all energy sources, present a strong potential for Ecosystems' environmental and mapping activities.

GRUMMAN INTERNATIONAL.

Robert L. Townsend,
President

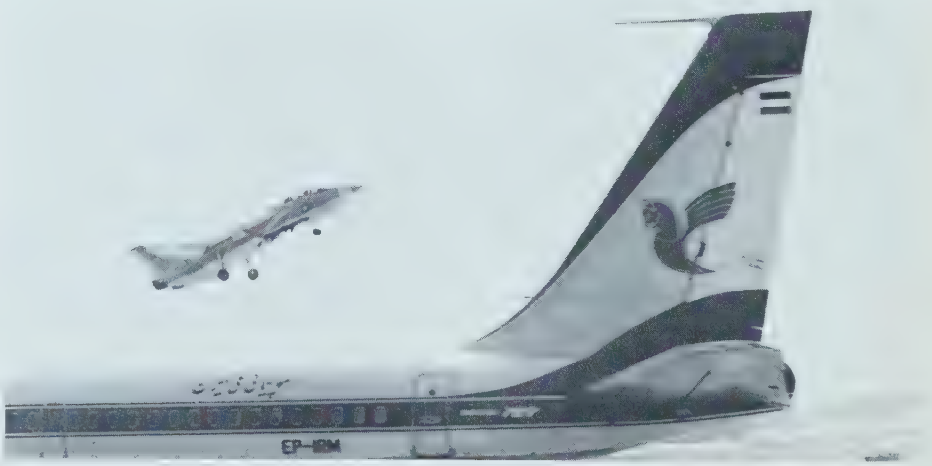
The announced Iranian buy of 30 F-14 Tomcat fighters is the largest single foreign program in Grumman's history. Prior to the announcement, Grumman International arranged flight demonstrations of the F-14 and provided full technical guidance and liaison for His Imperial Majesty the Shah of Iran. The year also saw increased sales efforts by Grumman International in other countries, such as Japan and Great Britain, which have shown interest in the E-2C Hawkeye system.

Grumman International offices in London and Tokyo were strengthened during the year, and plans were made to open two additional offices in Teheran, Iran, and Rio de Janeiro, Brazil. All offices are geared to promote both military and commercial business.

During 1973, the necessary groundwork was laid to establish a network of dealers in Europe for Pearson Yachts leading to display of their boats in European shows beginning early in 1974. While the current fuel shortage has affected sales prospects for Grumman Allied Industries' motor homes for private use, commercial applications are being considered in both Europe and South America.

Through International's efforts, four Grumman Albatross aircraft have been reconditioned at Grumman's Stuart, Florida, facility and have been sold to the Mexican Government. Additional aircraft are being considered for this year. This is a continuation of the plan of the Mexican Government to acquire Albatross airplanes over a period of several years. Continued strong interest in this aircraft exists throughout South America and new potential is developing in the Southeast Asian area.

A reconditioned Gulfstream I aircraft was sold to the Government of the Ivory Coast, a previous purchaser of the Gulfstream II, and mounting interest in these aircraft has also been evidenced by other African nations. Proposals have been submitted to countries in South America and the Middle East as well.



F-14 Tomcat take-off demonstration over Shah of Iran's transport aircraft.

Grumman Health Systems-designed emergency service vehicle.

VFW Fokker-designed "Aviobridge" for Boston-Logan International Airport.

Grumman Avio Systems

At the beginning of 1973, the corporation entered into a joint venture with the VFW-Fokker company of West Germany and the Netherlands to form Grumman Avio Systems Corporation. Under the terms of the venture agreement, the new company is licensed to design, build, install, and service passenger-loading bridges and other airport equipment in the U.S., Canada, and Central and South America. Avio Systems' headquarters and manufacturing facilities are located in Grand Prairie, Texas.

During its first year of operations, Avio Systems built and began deliveries of 10 Dutch-designed passenger-loading "Aviobridges" to the Boston-Logan Airport's International Terminal under contract to the Massachusetts Port Authority, and is currently completing installation of the units.

The company is presently manufacturing major sub-assemblies for 8 more bridges to be installed at London's Heathrow Airport, and is actively pursuing additional business through proposals to major airlines and both foreign and U.S. municipalities.

Grumman Health Systems

Grumman Health Systems Division's headquarters have been moved to Woodbury, N.Y., and considerably more space has been allocated to manufacturing facilities.

A complete line of emergency/medical/rescue vehicles has been introduced and contracted for in 1973, including rescue vehicles for the New York City Health and Hospital Corporation. Other specialized medical vehicles completed comprised dental vans and multiphasic health servicing units.

In the fields of medical instrumentation and hospital facilities, the Bronson-Turner Ophthalmic B-Scan (for diagnostic work on the eye) has found increasing acceptance in the ophthalmic field.

The Operating Room Control Console is also receiving increased interest from new or modernizing hospitals. In addition to the major surgery model, a general surgery unit has been developed and will be marketed in 1974. Another endeavor involves the installation of a Physiological Monitoring Life Support System at a Roslyn, N.Y., hospital. This Intensive Care System allows monitoring and analysis of both critically ill and post-operative patients.

Paumanock Development

Formerly known as Montauk Aero Corporation, Paumanock is a wholly owned subsidiary of Grumman Corporation and is actively engaged in the acquisition, sale, development and leasing of real estate, primarily on the east coast. With holdings in New York, Rhode Island, Maryland and Florida, the corporation is based in Bethpage, New York and provides assistance in real estate matters for the other Grumman subsidiaries. Paumanock serves as a real estate holding company, as part of an overall plan by Grumman to increase its diversification into commercial markets.

Consolidated Statement of Operations

	Year Ended December 31, 1973	1972
Sales	$1,082,569,646	$683,456,819
Other income	5,378,817	2,822,582
	1,087,948,463	686,279,401
Costs and expenses:		
Wages, materials, and other costs	1,045,683,397	791,463,619
Interest	7,955,147	5,755,785
Minority interests	1,366,602	211,220
Provision (credit) for Federal income taxes	16,000,000	(41,125,000)
	1,071,005,146	756,305,624
Income (loss) before extraordinary item	16,943,317	(70,026,223)
Extraordinary item—Federal income tax benefit resulting from utilization of net operating loss carryover	11,300,000	
Net Income (loss)	$ 28,243,317	$ (70,026,223)
Earnings (loss) per share:		
Primary		
Income (loss) before extraordinary item	$2.49	$ (10.26)
Extraordinary item	1.66	
Net Income (loss)	4.15	(10.26)
Fully diluted		
Income (loss) before extraordinary item	2.28	(10.26)
Extraordinary item	1.55	
Net Income (loss)	3.83	(10.26)

Consolidated Statement of Shareholders' Equity

	Two Years Ended December 31, 1973			
	Total	Common Stock	Retained Earnings	Treasury Stock
Shareholders' Equity at January 1, 1972	$139,220,772	$34,001,664	$113,972,975	$(8,753,867)
Treasury shares purchased (19,500)	(221,698)			(221,698)
Cash dividends paid—$.25 per share	(1,707,207)		(1,707,207)	
Net loss	(70,026,223)		(70,026,223)	
Shareholders' Equity at December 31, 1972	67,265,644	34,001,664	42,239,545	(8,975,565)
Treasury shares purchased (18,400)	(177,514)			(177,514)
Cash dividends paid—$.15 per share	(1,018,639)		(1,018,639)	
Net income	28,243,317		28,243,317	
Shareholders' Equity at December 31, 1973	$94,312,808	$34,001,664	$69,464,223	$(9,153,079)

The accompanying notes are an integral part of these financial statements.

Consolidated Statement of Changes in Financial Position

	Year Ended December 31, 1973	1972
Working capital, January 1	$96,144,050	$105,191,382
Source of Funds:		
Income (loss) before extraordinary item	16,943,317	(70,026,223)
Charges not requiring funds:		
Depreciation and amortization	17,168,763	19,639,620
Reduction in investment of purchased subsidiary for carryforward tax benefit	4,356,751	
Other	911,338	(441,246)
Funds from operations, exclusive of extraordinary item	39,380,169	(50,827,849)
Extraordinary item—Federal income tax benefit	11,300,000	
Funds from operations	50,680,169	(50,827,849)
Increase in long-term debt	20,312,918	56,487,819
Sale or retirement of property, plant and equipment	1,097,502	2,908,968
	72,090,589	8,568,938
Use of Funds:		
Expenditures for property, plant and equipment	9,460,212	10,070,751
Reduction in long-term debt	48,225,150	4,520,209
Cash dividends paid	1,018,639	1,707,207
Purchase of treasury stock	177,514	221,698
Acquisition of 81% interest in Grumman American Aviation Corporation	6,425,380	
Other	3,300,467	1,096,405
	68,607,362	17,616,270
Increase (decrease) in working capital	3,483,227	(9,047,332)
Working capital, December 31	$99,627,277	$96,144,050

Changes in Components of Working Capital:

	1973	1972
Increase (decrease) in current assets:		
Cash and marketable securities	$19,284,850	$14,659,727
Accounts receivable	3,576,272	723,573
Refundable Federal and state income taxes	(44,436,846)	12,800,000
Inventories	(2,212,681)	(3,756,378)
Other	210,862	(902,192)
	(23,577,543)	23,524,730
Decrease (increase) in current liabilities:		
Notes payable to banks and others	1,597,361	16,818,072
Accounts payable	(17,143,420)	1,563,815
Progress payments and customer deposits	47,325,604	(47,780,704)
Other	(4,718,775)	(3,173,245)
	27,060,770	(32,572,062)
Increase (Decrease) in working capital	$ 3,483,227	$ (9,047,332)

The accompanying notes are an integral part of these financial statements.

Grumman Corporation and Subsidiaries

Consolidated Balance Sheet

Assets	December 31, 1973	December 31, 1972
Current Assets		
Cash	$ 12,378,906	$ 13,679,329
Marketable securities (at cost)	31,385,273	10,800,000
Accounts receivable:		
U.S. Government	11,672,459	23,081,668
Reimbursable costs and accrued profits to be billed principally under Government contracts	49,211,116	45,337,051
Commercial	26,760,226	15,648,810
Total	87,643,801	84,067,529
Refundable Federal and state income taxes	363,154	44,800,000
Inventories, less progress payments	103,236,412	105,449,093
Prepaid expenses	2,661,311	2,450,449
Total Current Assets	237,668,857	261,246,400
Long-Term Lease Contracts Receivable	4,898,791	4,978,804
Property, Plant and Equipment (at cost)		
Buildings	80,850,427	77,168,755
Machinery and equipment	164,931,065	156,795,150
Leasehold improvements	15,731,345	16,107,136
	261,512,837	250,071,041
Less accumulated depreciation and amortization	162,670,804	149,707,545
	98,842,033	100,363,496
Construction in progress	1,781,359	1,577,146
Land	6,396,851	6,112,126
Net Property, Plant and Equipment	107,020,243	108,052,768
Other Assets and Deferred Charges	3,572,025	2,888,131
	$353,159,916	$377,166,103

The accompanying notes are an integral part of these financial statements.

Liabilities and Shareholders' Equity

	December 31, 1973	1972
Current Liabilities		
Notes payable to banks and others, including current installments on long-term debt	$ 11,217,587	$ 12,814,948
Accounts payable	70,907,699	53,764,279
Accrued wages and employee benefits	18,961,225	14,915,978
Progress payments and customer deposits	24,215,352	71,540,956
Other liabilities	12,739,717	12,066,189
Total Current Liabilities	138,041,580	165,102,350
Long-Term Debt		
Advances	24,000,000	54,000,000
$4^{1}/_{4}$% convertible subordinated debentures due September 1, 1992	49,488,000	49,488,000
Other debt	39,292,278	36,944,063
	112,780,278	140,432,063
Deferred Investment Tax Credit	2,758,565	2,529,626
Minority Interests in Subsidiaries	5,266,685	1,836,420
Shareholders' Equity		
Preferred stock—authorized 1,000,000 shares of $1.00 par value: none issued		
Common stock—authorized 20,000,000 shares of $1.00 par value: Issued 7,267,956 shares	34,001,664	34,001,664
Earnings retained for use in the business	69,464,223	42,239,545
	103,465,887	76,241,209
Less cost of common stock in treasury; 1973, 477,028 shares; 1972, 458,628 shares	9,153,079	8,975,565
Total Shareholders' Equity	94,312,808	67,265,644
	$353,159,916	$377,166,103

The accompanying notes are an integral part of these financial statements.

Notes To Financial Statements

NOTE 1. *Summary of Significant Accounting Policies*

Basis of Consolidation

The consolidated financial statements include all subsidiary companies.

The excess of investments in consolidated subsidiaries over the book value of the underlying net assets at December 31, 1973 and 1972 was $1,968,960 and $1,537,867, respectively, which amounts are included in Other Assets.

Inventories

Inventories are carried at the lower of cost or realizable values and are summarized as follows:

	1973	1972
Work in process	$363,750,108	$380,448,665
Raw materials, purchased parts and supplies ...	92,935,011	71,488,786
	456,685,119	451,937,451
Deduct progress payments	353,448,707	346,488,358
	$103,236,412	$105,449,093

Under the contractual arrangements by which progress payments are received from the Government, title to inventories identified with related contracts is vested in the Government. Overhead expenses (including general and administrative expenses) are allocated to all Government contracts since they are included in the negotiated prices for goods and services and are classified in the financial statements as work in process or as costs and expenses.

Sales under U.S. Government Contracts

Sales and profits (based on estimated average final costs) under Government fixed-price type contracts are recorded at the time of delivery in the case of production contracts and as costs are incurred in the case of research, development, test and evaluation contracts. Sales under Government cost-reimbursement type contracts are recorded as costs are incurred and include applicable earned fees essentially in the proportion that costs incurred bear to total estimated final costs. Certain contracts contain cost and/or performance incentives which provide for an increase or decrease of profits dependent upon whether cost and/or product performance targets are surpassed or not attained, respectively. The effects of these incentives are reflected in income when there is sufficient information to relate actual performance to the targets with the result that earnings recorded in one period may include adjustments related to sales recorded in a prior period. Losses on contracts are recorded when they become known.

Depreciation and Amortization

The declining-balance depreciation method is applied to new properties acquired since January 1, 1954, except for automotive equipment, which, together with older properties, is depreciated on a straight-line basis. Depreciation and amortization for 1973 and 1972 amounted to $17,168,763 and $19,639,620, respectively. Maintenance and repair expense is charged to overhead as incurred.

Retirement Plans

The Company and a subsidiary have non-contributory pension plans, and the contributions which are actuarially determined, totaled $25,931,959 in 1973 and $25,350,314 in 1972. The past service costs of the Company's plan have been paid; the unfunded past service cost of the subsidiary's plan is being amortized over 24 years.

Federal Income Taxes

The Company and its subsidiaries have agreed to file a consolidated Federal tax return. Each subsidiary's Federal income tax liability or credit will be determined as if it were filing a separate Federal income tax return with a payment to be made to or a refund received from the Company as appropriate.

Investment tax credits are deferred and amortized over the expected lives of the related facilities through reduction of the provision for Federal taxes on income. Net investment credits added in 1973 applicable to facilities acquired or leased during 1973 totaled $894,-439. Amortization included in income for 1973 was $665,500 and $738,200 in 1972.

Research and Development Costs

Research and development costs associated with commercial activities are charged to earnings during the year incurred and amounted to $5,608,728 in 1973. Independent research and development performed by the Aerospace subsidiary are charged to work in process inventories to the extent allowed under United States Government procurement practices. Costs in excess of allowable amounts are charged against income in the year incurred.

Earnings Per Share

Primary earnings (loss) per share are based on the weighted average of outstanding shares. Although their effect is insignificant, recognition has been given to those outstanding stock options that qualify as common stock equivalents on the assumption that such options were exercised at the beginning of the year or at the time of grant, if later. Fully diluted earnings per share are computed on the same basis with the additional assumption that all of the convertible debentures were converted into common stock at the beginning of the year and that the related interest expense, on such debentures, net of applicable income taxes was added back to net income for the year. For the year ended December 31, 1972, primary and fully diluted losses per share exclude the effect of stock options and the conversion of the debentures, since their inclusion would have been antidilutive.

NOTE 2. *F-14 Contract Settlement*

On March 8, 1973 the Company and the Government reached a settlement with regard to the F-14 contract. The Company agreed to accept the previously rejected Lot V order for 48 additional aircraft under the original terms of the contract and the Government agreed to cancel options under that contract for aircraft beyond Lot V.

At December 31, 1972, it was expected that the 134 aircraft and related support effort ordered in Lots I through V would result in a loss, under this contract, of $205,000,000 before tax adjustments. At September 30, 1973 this expected loss was increased to $220,000,000. In determining this loss, the net effect of price adjustments resulting from known contract changes and realignment of program schedules were taken into consideration. Of this loss $65,000,000 was reflected in 1971, $140,000,000 in 1972 and $15,000,000 in 1973, by a write down of F-14 inventories to realizable values.

Additional orders for F-14 aircraft beyond Lot V will be procured by the Government through the conventional annual procurement method which allows contracts to be priced on the basis of current estimated costs, and takes into account extreme inflationary factors and other economic conditions.

NOTE 3. *Federal Income Taxes*

The Federal income tax benefits arising from utilizing the available operating loss carryforwards in the year 1973 are summarized in the following table:

	In Thousands		
	Company	Grumman American	Consolidated Total
Loss carryforward available January 2, 1973	$31,000	$11,200	$42,200
Loss carryforward balance at December 31, 1973.	7,500	—	7,500
Loss carryforward utilized in 1973	23,500	11,200	34,700
Federal income tax benefit generated @ 48%	11,300	5,363	16,663
Minority interest share of benefit ...	—	1,006	1,006
Net Federal Income Tax Benefit	$11,300	$ 4,357	$15,657

The tax benefit of $4,357,000 resulting from the utilization of the tax loss carryforwards, which losses arose prior to the acquisition of the Company's interest in Grumman American, has been treated as a reduction of the Company's investment in Grumman American. The other portion of the tax benefit, or $11,300,000, has been included as an extraordinary item in the consolidated statement of operations. There are no Federal income taxes currently payable as a result of utilizing the operating loss carryforwards.

Federal income tax expense or credit is included in the consolidated statement of operations at the statutory rate (48%) applied to income or loss per books reduced by the amortization of the deferred investment tax credit. For the year 1972 this computed amount was reduced to reflect the maximum amount recoverable, namely, the total income taxes actually paid in 1969 and 1970.

NOTE 4. *Advances*

Grumman Aerospace Corporation entered into an Advance Payment Pool Agreement with the Government on August 8, 1972 which provides Grumman Aerospace with financing for its Navy programs. Advances, at an interest rate of 6⅞% under this agreement totaled $24,000,000 at December 31, 1973 and $54,000,000 at December 31, 1972. These advances are secured by inventories of these programs and the future receipts under the applicable contracts. Grumman Aerospace has the right to terminate this financial arrangement upon the repayment of any monies advanced.

Under the present terms of this agreement, the Company is permitted to pay cash dividends of up to 50% of consolidated net income each year that this Advance Payment Pool Agreement remains in effect. There is no restriction on dividends payable in stock of the Company. However, the payment of dividends is also restricted by the terms of the indenture under which its subordinated convertible debentures were issued, as discussed in Note 5.

NOTE 5. *Convertible Subordinated Debentures and Other Debt*

The subordinated debentures are convertible at any time prior to maturity into common stock at $43.50 per share subject to antidilution adjustment under certain conditions. Sinking fund payments are required commencing in 1978 of amounts sufficient to retire in each year 5% of the principal amount of debentures outstanding as of March 1, 1978. The debentures may be called by the Company at any time at prices decreasing from 102.94% of face value currently to 100% in 1987.

The indenture under which these debentures were issued includes, among other covenants, certain restrictions as to the amount of retained earnings of the Company which may be used to pay cash dividends on common stock or to purchase its own capital stock of any class. Under these provisions retained earnings in the amount of $5,870,886 were unrestricted at December 31, 1973.

Other debt at December 31, was as follows:

	1973	1972
Unsecured Bank Borrowings		
Thirty-day and ninety-day notes	$ 2,950,000	$ 5,135,000
Various maturities due both currently and beyond one year	8,142,651	1,371,034
¼% over prime rate bank loan due June 1, 1977 in quarterly installments of $500,000	7,000,000	9,000,000
5% bank note due in quarterly installments of $25,000 to February 18, 1975 and the balance, $500,000, on May 18, 1975	625,000	725,000
	18,717,651	16,231,034

Secured Borrowings

5% note due in annual installments of $2,000,000 to August 1, 1978	10,000,000	12,000,000
Installment notes at various rates secured by lease contracts	8,037,849	7,860,749
6% mortgage loan due in monthly installments of $11,285 to January 1, 1985	1,094,100	1,161,658
Various mortgage loans..	2,281,168	2,344,148
	21,413,117	23,366,555
Lease obligations	7,616,482	7,228,761
Renegotiation settlement payable	2,762,615	2,932,661
Total	$50,509,865	$49,759,011

The above total is classified on the balance sheet as follows:

	1973	1972
Current	$11,217,587	$12,814,948
Long-term	39,292,278	36,944,063
Total	$50,509,865	$49,759,011

With respect to unsecured bank borrowings, the compensating balance requirements totaled $2,875,000 at December 31, 1973. The average interest rate on these borrowings was 8.56% during 1973.

NOTE 6. *Renegotiation*

A substantial portion of sales are subject to the Renegotiation Act of 1951. Renegotiation has been concluded through 1966 and for the years 1967 through 1971 the Company has been advised that the Eastern Regional Renegotiation Board has determined that no excessive profits exist in these years. Clearances for the years 1967 through 1971 are still subject to final review and approval by the statutory Renegotiation Board. On the basis of data now available, it is the opinion of the Company that profits from renegotiable business for the years 1967 through 1973 were within limitations which the Renegotiation Board has considered reasonable in the past and that refunds for those years should not be required by the Renegotiation Board.

In December 1972, after lengthy negotiations, the Company settled its 1965 and 1966 renegotiation cases for a net cost of approximately $3,541,000 after adjustments for interest and tax refunds. Of this amount, approximately $2,046,000 was charged to reserves previously established for the purpose and the remainder, approximately $1,495,000, was charged against earnings retained for use in the business. Of the unpaid balance at December 31, 1973, $500,000 is payable on December 31, 1974 and the balance on December 31, 1975. Interest on the 1965 and 1966 principal amounts is payable at the rates of 4% and 7⅛% per annum, respectively.

NOTE 7. *Stock Options—Management Incentive Plan*

The "1972 Stock Option Plan" provides for the granting, at any time prior to April 30, 1982, of options to purchase not more than 200,000 shares of common stock. Options were outstanding under this plan at December 31, 1973 and 1972 for the purchase of 101,100 shares and 29,800 shares, respectively, at prices ranging from $8.50 to $11.00 per share, which prices are not less than the fair market value of the shares at the dates granted. At December 31, 1973 and 1972 98,900 and 170,200 shares, respectively, were reserved for future grants under this plan. No options were exercised during 1973 and 1972.

The Company's "1968 Stock Option Plan" was terminated on May 16, 1972. However, options granted prior to that date are exercisable until their expiration dates. Options were outstanding at December 31, 1973 and 1972 for the purchase of 72,650 and 205,800 shares, respectively, at prices ranging from $18.875 to $33.00 per share, which prices are not less than the fair market value at the dates granted. No options were exercised during 1973 and 1972.

Officers and key employees of the Company and most of its subsidiaries are eligible to participate in a Management Incentive Plan adopted by the Board of Directors on January 20, 1972. The maximum amounts available for total awards under the Incentive Plan shall be equal to 7% of calendar year pretax profits, as defined, which are in excess of 10% of average invested capital, as defined. No amounts have been provided in 1973 for management incentive awards.

NOTE 8. *Acquisition*

As of January 2, 1973, Grumman Aerospace Corporation acquired 100% of the 4% cumulative preferred stock and 81% of the common stock of Grumman American Aviation Corporation (formerly American Aviation Corporation), a manufacturer of single engine light aircraft for training and the general aviation market, in exchange for the net assets of Aerospace pertaining to its commercial products. Substantially all of these assets, having a total book value of approximately $28 million, are located in Savannah, Georgia, where Gulfstream II is manufactured. Approximately $4.8 million of American Aviation assets were acquired in the exchange. Also, as of January 2, 1973, the employees at the Savannah facility became employees of Grumman American, and the common shares received by Aerospace were distributed to Grumman Corporation. The investment in Grumman American Aviation Corporation was accounted for by the purchase method for business combinations.

The following consolidated results for the year ended December 31, 1972 are based on the assumption that the acquisition of American Aviation took place on January 1, 1972:

Sales and other income	$692,017,026
Net income (loss)	(72,572,161)
Earnings (loss) per share	$(10.63)

NOTE 9. *Commitments*

Rents of property and equipment for the year ended December 31, 1973 and 1972 were $11,991,995 and $13,928,942, respectively. Minimum rental commitments under noncancellable leases are as follows:

(In Thousands)

	1974	1975	1976	1977	1978	1979-1983
Real Property	$1,658	$1,213	$811	$759	$769	$297
Personal Property	2,044	1,408	713	681	522	338

NOTE 10. *Proposed Acquisition*

The Board of Directors of Grumman Corporation has approved a plan for acquiring all of the common shares constituting the minority interest, approximately 19% of the total, in its subsidiary, Grumman Allied Industries, Inc. This subsidiary manufactures and sells commercial products which include aluminum truck bodies, fiberglass yachts, aluminum canoes, motorhomes, etc.

The minority shareholders of Grumman Allied will be offered one share of a new issue of $.80 convertible preferred shares of Grumman Corporation for each share of Grumman Allied common stock. The preferred shares will be convertible into Grumman Corporation common stock on a one for one basis and can be redeemed by the Company beginning January 1, 1982. The $.80 per share dividend on the preferred shares will be cumulative to the extent it was earned but not paid in any year.

Report of Independent Certified Public Accountants

HURDMAN AND
CRANSTOUN

CERTIFIED PUBLIC ACCOUNTANTS · 140 BROADWAY · NEW YORK, N.Y. 10005

To the Shareholders and
Board of Directors of
Grumman Corporation

We have examined the consolidated balance sheet of Grumman Corporation and subsidiaries as of December 31, 1973 and 1972 and the related consolidated statements of operations, shareholders' equity, and changes in financial position for the years then ended. Our examinations were made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the financial statements identified above present fairly the financial position of Grumman Corporation and subsidiaries consolidated at December 31, 1973 and 1972 and the results of their operations and the changes in shareholders' equity and financial position for the years then ended, in conformity with generally accepted accounting principles applied on a consistent basis.

Hurdman and Cranstoun

Certified Public Accountants

February 11, 1974

TELEPHONE (212) 269-5800 TELEX 235648 CABLE HURDCRAN, NEW YORK

Ten Year Summary (Dollars are stated in thousands except per share amounts)

	1973	1972	1971	1970	1969	1968
Operations						
Sales	$1,082,570	$ 683,457	$ 799,021	$ 993,261	$1,180,328	$1,152,571
Provision (credit) for Federal income taxes	16,000	(41,125)	(18,200)	17,500	22,500	19,700
Net income (loss) before extraordinary item	16,943	(70,026)	(17,990)	20,272	22,088	19,037
Extraordinary item	11,300					
Net income (loss)	28,243	(70,026)	(17,990)	20,272	22,088	19,037
% of sales	2.61%	(10.25) %	(2.25) %	2.04%	1.87%	1.65%
Earnings per share:						
Primary:*						
Income (loss) before extraordinary item	2.49	(10.26)	(2.58)	2.90	3.06	2.65
Extraordinary item	1.66					
Net income (loss)	4.15	(10.26)	(2.58)	2.90	3.06	2.65
Fully diluted:						
Income (loss) before extraordinary item	2.28	(10.26)	(2.58)	2.62	2.76	2.43
Extraordinary item	1.55					
Net income (loss)	3.83	(10.26)	(2.58)	2.62	2.76	2.43
Cash dividends paid:						
Amount	1,019	1,707	6,988	6,968	7,206	7,107
Per share	.15	.25	1.00	1.00	1.00	1.00
% of net income	3.6%			34.4%	32.6%	37.3%
Financial Position at December 31						
Current assets	$ 237,669	$ 261,246	$ 237,722	$ 252,609	$ 238,044	$ 236,215
Current liabilities	138,042	165,102	132,530	127,990	133,884	127,540
Working capital	99,627	96,144	105,192	124,619	104,160	108,675
Net property, plant and equipment	107,020	108,053	120,531	132,345	133,909	114,563
Long-term debt	112,780	140,432	88,464	85,442	75,589	78,277
Shareholders' equity	94,313	67,266	139,221	167,898	157,914	143,034
Shareholders' equity per share	13.89	9.88	20.39	24.07	22.14	20.10
Other data at December 31						
Backlog	$1,442,000	$1,684,000	$1,352,000	$1,034,000	$ 930,000	$ 790,000
Expenditures for facilities (net)	$ 8,363	$ 7,162	$ 10,056	$ 22,991	$ 36,012	$ 39,518
Number of employees	27,000	25,000	25,000	28,000	34,000	36,000
Number of shareholders of record	19,641	19,109	18,941	18,820	16,783	16,244
Common shares outstanding	6,790,928	6,809,328	6,828,828	6,975,722	7,133,856	7,117,664

Data have been restated to reflect renegotiation settlement and all stock distributions.

*Average outstanding shares and common stock equivalents were used in determining primary earnings per share.

1967	1966	1965	1964
$ 968,596	$1,054,701	$ 849,751	$ 598,376
18,500	23,137	20,575	11,965
21,451	26,127	20,936	10,660
21,451	26,127	20,936	10,660
2.21%	2.48%	2.46%	1.78%
3.00	3.67	2.99	1.55
3.00	3.67	2.99	1.55
2.89	3.66	2.96	1.55
2.89	3.66	2.96	1.55
5,656	4,581	3,828	3,363
.80	.65	.55	.49
26.4%	17.5%	18.3%	31.5%
$ 219,390	$ 209,102	$ 195,387	$ 182,862
100,888	138,569	131,293	135,710
118,502	70,533	64,094	47,152
92,580	74,832	51,657	44,010
80,179	31,219	25,800	18,850
130,687	113,861	89,952	72,053
18.43	16.21	12.98	10.69
$1,071,000	$1,215,000	$1,462,000	$ 820,000
$ 35,437	$ 26,819	$ 16,600	$ 14,790
35,000	34,000	30,000	23,000
15,178	13,980	11,801	10,340
7,091,633	7,024,321	6,930,441	6,740,100

Financial Review

A summary of data describing financial operations throughout 1973 is presented in this section of the annual report to assist shareholders and other readers in their assessments of the Corporation's performance.

Sales and Earnings

Consolidated sales and earnings figures were reported to shareholders in quarterly interim statements for 1973, and are summarized below:

($000 Omitted, Except per share amounts)

	Sales and Other Income	Income Before Extraordinary Item		Net Income	
Quarter Ended	Amount	Amount	Primary Earnings Per Share	Amount	Primary Earnings Per Share
March 31	$ 185,101	$ 3,127	$ .46	$ 5,970	$ .88
June 30	254,879	5,361	.79	10,048	1.48
Sept. 30	288,416	4,144	.61	4,615	.67
Dec. 31	359,552	4,311	.63	7,610	1.12
	$1,087,948	$16,943	$2.49	$28,243	$4.15

Interim statements also included sales and income results by major subsidiary. Those results for the entire year 1973 are as follows:

($000 Omitted)

	Sales and Other Income	Income Before Extraordinary Item	Net Income
Grumman Aerospace . .	$ 947,110	$13,020	$24,520
Grumman Allied Industries	44,289	1,060	1,060
Grumman American Aviation	86,816	6,399	11,763
Grumman Data Systems	37,755	993	993
Grumman Ecosystems	3,705	(265)	(265)
Corporate Overhead, Interest Expense and Other Operations . .	13,437	(2,816)	(3,016)
Subtotal	1,133,112	18,391	35,055
Intercompany Eliminations and Minority Interests	45,164	1,448	6,812*
Consolidated Totals	$1,087,948	$16,943	$28,243

*Includes approximately $4,357,000 of Federal income tax benefit resulting from the use of tax loss carryforwards that arose prior to the acquisition of the Company's interest in Grumman American Aviation Corporation. In consolidation this tax benefit is treated as a reduction of the Company's investment in Grumman American. In Grumman American's individual statement of income, it is included as an extraordinary item of income.

OFFICERS and DIRECTORS

March, 1974

GRUMMAN CORPORATION

*†E. Clinton Towl—Chairman of the Board
*†John C. Bierwirth—President
Edward Balinsky
Vice President—Investment Management
John F. Carr—Vice President—Administration
Patrick J. Cherry—Vice President—Controller
Robert G. Freese—Vice President—Treasurer
John B. Rettaliata—Vice President—Public Affairs
Peter E. Viemeister—Vice President—Development
Lawrence M. Pierce
General Counsel and Assistant Secretary
Robert W. Bradshaw—Secretary
James J. Reilly—Assistant Treasurer
John E. Galligan
Assistant Secretary and Assistant General Counsel
Nat P. Busi—Assistant Controller

Directors:
*Denotes Officer who is also a *Director*. Other *Directors* are—
Charles E. Dunbar
Chairman of the Board, Discount Corporation of New York
†Joseph G. Gavin, Jr.
Chairman of the Board,
Grumman Aerospace Corporation
David L. Grumman
President, Enercon, Ltd.
Harry S. Howard, Jr.
President and Director, American Can Company
†Wm. T. Schwendler
Retired Chairman of the Executive Committee,
Grumman Corporation
George M. Skurla
President, Grumman Aerospace Corporation
George F. Titterton
Retired Senior Vice President, Grumman Corporation
†Also a member of the Executive Committee

Leroy R. Grumman—Honorary Chairman of the Board

Directors Emeriti are—
John L. Collyer
Retired Chairman of the Board and President,
The B. F. Goodrich Company
Albert P. Loening
Chairman of the Board, Agawam Aircraft Products, Inc.

GRUMMAN AEROSPACE CORPORATION

*Joseph G. Gavin, Jr.
Chairman of the Board
*George M. Skurla
President
*William M. Zarkowsky
Vice Chairman of the Board
*Ira G. Hedrick
Senior Vice President—Advanced Systems Technology
*Corwin H. Meyer
Senior Vice President—Customer Requirements
John O'Brien
Administrative Vice President—Resources
A. D. Alexandrovich
Vice President—Product and Technology Development
John M. Buxton
Vice President—President, Grumman Houston Corporation
Edward Dalva
Vice President—Operations Manager, Bethpage
Thomas W. Johnson
Vice President—Manufacturing Operations
Thomas J. Kelly
Vice President—Space Programs
Lawrence M. Mead, Jr.
Vice President—Technical Operations
Ross S. Mickey
Vice President—Aircraft and Other Programs
Robert C. Miller
Vice President—EA-6B and EF-111 Programs
Gordon H. Ochenrider—Vice President
Michael Pelehach
Vice President—F-14 Program
G. Thomas Rozzi
Vice President—Security and Personnel
L. M. Satterfield—Vice President
Ralph H. Tripp
Vice President—General Manager, Great River
A. James Zusi
Vice President—Operations Quality
Carl A. Paladino—Treasurer
Raphael Mur
Secretary and General Counsel
Robert W. Ballin—Assistant Secretary
Adelaide L. McKay—Assistant Secretary

Directors:
*Denotes Officer who is also a *Director*. Other *Directors* are—

John C. Bierwirth, E. Clinton Towl
Jean R. Esquerre,
Asst. to Chairman and President, Grumman Aerospace

GRUMMAN ALLIED INDUSTRIES, INC.

*Wallace B. Spielman—Chairman of the Board
*Robert F. Loar—President
Wells A. Darling
Vice President—Recreational Products and Special Vehicles
Robert J. Farren—Vice President—Facilities
*James L. Maxwell
Vice President—General Manager, Metal Boat Division
J. J. Serota
Vice President and Secretary
William H. Shaw
Vice President—Pearson Yacht Division
Robert W. Somerville
Vice President—Automotive
Robert G. Landon—Treasurer
Steven Dely—Assistant Secretary

Directors:
*Denotes Officer who is also a *Director*. Other *Directors* are—
John C. Bierwirth, E. Clinton Towl

GRUMMAN AMERICAN AVIATION CORPORATION

*E. Clinton Towl —Chairman of the Board
*Russell W. Meyer, Jr. —President
Roy C. Garrison
Vice President—Commercial Light Aircraft Marketing
Alan B. Lemlein
Vice President—General Manager, Savannah Operations
Arnold D. Palmer
Vice President—Public Relations
William C. Seidel
Vice President—General Manager, Cleveland Operations
Charles G. Vogeley
Vice President—Commercial Jet Marketing
Harry S. Wilson —Vice President—Finance
*Robert G. Freese —Treasurer
Fred D. Kidder —Secretary

Directors:
*Denotes Officer who is also a *Director*. Other *Directors* are—
John C. Bierwirth, Ira G. Hedrick, Corwin H. Meyer
David S. Ingalls, Jr., Consultant
Arthur B. Modell, President, Treasurer and Principal Owner, Cleveland Browns, Inc.
Duane Stranahan, Jr., Attorney, Marshall, Melhorn, Bloch & Belt, Toledo, Ohio

GRUMMAN DATA SYSTEMS CORPORATION

*E. Clinton Towl —Chairman of the Board
*Robert A. Nafis —President
James M. Conners
Vice President—Division Management
Derwin C. De Forest
Vice President—Network Services
Dominic J. Di Falco
Vice President—Grumman Account
Robert T. Pearson
Vice President—Products
Burton Stern
Vice President—Finance
Walter C. Wood, Jr.
Vice President—Commercial Systems
James M. Pettit —Treasurer
Robert W. Bradshaw —Secretary
Richard V. Zand
Assistant Secretary and General Counsel

Directors:
*Denotes Officer who is also a *Director*. Other *Directors* are—
John C. Bierwirth, Robert G. Freese

GRUMMAN ECOSYSTEMS CORPORATION

*E. Clinton Towl —Chairman of the Board
*Wm. T. Schwendler, Jr. —President and Treasurer
Thomas W. Attridge, Jr.
Vice President—Operations, Environmental and Mapping Division
Clifford F. Jessberger
Vice President—Operations, Pollution Control Division
William T. Malloy
Vice President—General Manager, Environmental and Mapping Division
Edward A. Sargent
Vice President—Sales, Pollution Control Division
Robert W. Bradshaw —Secretary
Raymond E. Montano —Controller
Joseph P. Missbach, Jr.
Assistant Secretary

Directors:
*Denotes Officer who is also a *Director*. Other *Directors* are—
John C. Bierwirth, Robert F. Loar, William M. Zarkowsky

GRUMMAN INTERNATIONAL, INC.

*E. Clinton Towl —Chairman of the Board
*Robert L. Townsend —President
Thomas A. Brancati —Vice President
Robert S. Mullaney —Vice President
Peter B. Oram —Vice President
Joseph Y. Rodriguez —Vice President
Edwin V. Zolkoski —Vice President
*Patrick J. Cherry —Treasurer
Mellor A. Gill —Secretary
Henry G. Hinz —Assistant Treasurer
William James —Assistant Secretary

Directors:
*Denotes Officer who is also a *Director*. Other *Directors* are—
John C. Bierwirth, Joseph G. Gavin, Jr., Russell W. Meyer, Jr., Wallace B. Spielman, William M. Zarkowsky
William I. Martin, Consultant
Norman S. Paul, Attorney, Gadsby & Hannah, Washington, D.C.

PAUMANOCK DEVELOPMENT CORPORATION†

*E. Clinton Towl —Chairman of the Board
*Chester M. Parker —President
Thomas D. Gill
Vice President and Assistant Secretary
Robert G. Freese —Treasurer
John E. Galligan —Secretary
Gerard J. Vanella —Controller
James J. Reilly —Assistant Treasurer

Directors:
*Denotes Officer who is also a *Director*. Another *Director* is—
John C. Bierwirth

†Name changed from Montauk Aero Corporation on September 13, 1973, by charter amendment.

GRUMMAN CORPORATION
BETHPAGE, NEW YORK 11714